

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for ultrasound imaging comprising the steps of:
transmitting ultrasound energy into a target volume at at least a first fundamental frequency;
receiving a signal of reflected and/or scattered ultrasound energy from the target volume;
and
detecting components of the received signal at multiple harmonics of the fundamental frequency.
2. (Original) The method of claim 1 further comprising generating an image of the target volume using the multiple harmonic components of the received signal.
3. (Currently Amended) The method of ~~claim 1~~ or claim 2 wherein the detected components comprise the second harmonic and at least one higher harmonic.
4. (Currently Amended) The method of ~~claim 1~~ or claim 2 wherein the detected components comprise the third harmonic and at least one higher harmonic.
5. (Currently Amended) The method of claim 4 wherein the detected components comprise the third, fourth and fifth harmonics.
6. (Currently Amended) The method of ~~any preceding~~ claim 8 applied in the direct imaging of at least one of tissue and/or fluids in a body.

7. (Original) The method of claim 6 applied in the direct imaging of tissue in a body.
8. (Currently Amended) The method of claim 6 ~~or claim 7~~ applied without the use of artificial contrast agents introduced into the body.
9. (Currently Amended) A method for ultrasound imaging comprising the steps of:
transmitting ultrasound energy into a target volume at at least a first fundamental frequency;
receiving a signal of reflected and scattered ultrasound energy from the target volume; and
detecting components of the received signal at one or more of the third harmonic, the fourth harmonic, the fifth harmonic or any higher harmonics of the fundamental frequency.
10. (Original) The method of claim 9 further comprising generating an image of the target volume using only the detected harmonic component.
11. (Currently Amended) The method of ~~any preceding~~ claim 10 wherein the detected components relate to received ultrasound energy form tissue.
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)

18. (Original) Apparatus for ultrasound imaging comprising:
 - a transmitter for transmitting acoustic energy into a target volume at at least a first frequency;
 - a receive transducer for receiving reflected and/or scattered acoustic energy from the target volume over plurality of frequencies; and
 - a filter for detecting components of the received signal at multiple harmonics of the fundamental frequency.
19. (Original) The apparatus of claim 18 further comprising signal processing means for generating an image of the target volume using the multiple harmonic components of the received signal.
20. (Currently Amended) The apparatus of claim 18 ~~or claim 19~~ wherein the filter is adapted to detect the second harmonic and at least one higher harmonic of the fundamental frequency in the received signal.
21. (Currently Amended) The apparatus of claim 18 ~~or claim 19~~ wherein the filter is adapted to detect the third harmonic and at least one higher harmonic of the fundamental frequency in the received signal.
22. (Original) The apparatus of claim 21 wherein the detected components comprise the third, fourth and fifth harmonics.
23. (Cancelled)
24. (Cancelled)
25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (New) The method of claim 1 wherein the detected components comprise the second harmonic and at least one higher harmonic.

31. (New) The method of claim 1 wherein the detected components comprise the third harmonic and at least one higher harmonic.

32. (New) The method of claim 31 wherein the detected components comprise the third, fourth and fifth harmonics.

33. (New) The method of claim 6 applied without the use of artificial contrast agents introduced into the body.